

# APPENDIX D

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## ASTHMA AND THE ENVIRONMENT: A STRATEGY TO PROTECT CHILDREN

### Executive Summary



A Report of the President's Task Force on  
Environmental Risks and Safety Risks to Children

Full report available at: [www.health.gov/environment](http://www.health.gov/environment) or [www.epa.gov/children/asthma.htm](http://www.epa.gov/children/asthma.htm)

## About The President's Task Force on Environmental Health Risks and Safety Risks to Children

In recognition of the growing body of scientific information demonstrating that America's children suffer disproportionately from environmental health risks and safety risks, President Clinton issued Executive Order 13045 on April 21, 1997, directing each Federal Agency to make



it a high priority to identify, assess, and address those risks. In issuing this order, the President also created the Task Force on Environmental Health Risks and Safety Risks to Children, co-chaired by Donna Shalala, Secretary of the Department of Health and Human Services, and Carol M. Browner, Administrator of the Environmental Protection Agency. The Task Force was charged with recommending strategies for protecting children's environmental health and safety. Two subcommittees were established in the Executive Order to carry out this directive: a

subcommittee directed to review and foster public access to federal government sponsored research on environmental health and safety risks to children, and a subcommittee directed to identify priority public outreach activities related to protecting children's environmental health and safety.

In April 1998, the Task Force identified four priority areas for immediate attention: childhood asthma, unintentional injuries, developmental disorders, and childhood cancer. The Task Force created and charged the Asthma Priority Area Workgroup, co-chaired by EPA and DHHS, with reviewing current Federal efforts to address the many facets of the issue and, most importantly, to make appropriate recommendations for action by the Federal government. This strategy is the result of that effort.

## **Members Of The President's Task Force On Environmental Health Risks and Safety Risks To Children**

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## Executive Summary

An epidemic of asthma is occurring in the United States. While the epidemic affects people of all ages, children are particularly affected. Nearly 1 in 13 school-aged children has asthma, and the percentage of children with asthma (i.e., prevalence rate) is rising more rapidly in preschool-aged children than in any other age group.

There is no national system to collect data from states specifically on asthma, although several states are developing systems to collect such data. Although national data do not provide the resolution necessary to identify particular geographic areas hardest hit by the asthma epidemic, surveys undertaken in a number of large cities in the United States indicate that the prevalence and severity of asthma are greatest in the large, urban inner cities.

**An epidemic of asthma is occurring in the United States**

Asthma is one of the leading causes of school absenteeism, accounting for over 10 million missed school days per year. Asthma also accounts for many nights of interrupted sleep, limitation of activity, and disruptions of family and care-giver routines. Asthma symptoms that are not severe enough to require a visit to an emergency room or to a physician can still be severe enough to prevent a child with asthma from living a fully active life.

In 1998, the cost of asthma to the U.S. economy was estimated to be \$11.3 billion, with the majority of the expense attributed to direct medical expenses. This estimate, which is not limited to the costs of childhood asthma, indicate that the direct medical costs of asthma account for approximately 1% of all health care expenditures in the United States.

Asthma is a particularly important disease to consider in the context of environmental hazards to which children are exposed. Children breathe more air, eat more food, and drink more liquid in proportion to their body weight than do adults, and their developing respiratory, immunological, and digestive systems may be more susceptible to environmental exposures than those of adults. In a typical day, children may be exposed to a wide array of environmental agents at home, in day care centers, schools and while playing outdoors. There is substantial evidence that environmental exposures, including viruses and allergens, play a major role in triggering asthma symptoms. Indoor airborne allergens include those from house dust mites, cockroaches, mold and animal dander. In addition, exposure to environmental tobacco smoke (ETS), also known as secondhand smoke, has been shown to be a major determinant of asthma symptoms. Elevated levels of outdoor air pollutants, particularly ozone and exposure to outdoor allergens (e.g. pollens, molds), are associated with increased symptoms and an increased risk of emergency department visits for asthma, as well.

In addition, environmental factors such as airborne allergens and environmental tobacco smoke may play a major role in the onset of asthma. Other pollutants may also play a role, although the scientific data are inadequate to offer firm conclusions. Genetic predisposition is the strongest known risk factor for developing asthma, but the rapidly rising number of cases of childhood asthma cannot be solely genetic because the genetic composition of the population changes slowly. Rather, some interaction between genetic predisposition and environmental exposures, and possibly other factors such as diet, increased body weight, or lack of exercise are likely to be responsible for the increase. Further work is essential to clarify how genetic susceptibility and environmental exposures interact to cause asthma.

Reducing exposures of children with asthma to airborne allergens and pollutants will reduce the health burden of asthma and significantly improve their quality of life. It is not yet certain, but it is possible that reducing the exposure of infants and young children at risk of developing asthma may prevent its onset. Environmental control methods and asthma treatments are available now that can help children and their families control asthma and lead healthy, active lives. Yet not all children have access to these measures. Too many children miss school, limit their physical activity, and are seriously ill because of asthma. A child ill with asthma also has an impact on the entire family.

This strategy, prepared by the Task Force, is aimed at developing a further understanding of the role of environmental factors associated with the:

- **onset of asthma; and**
- **triggers of asthma attacks**

The efforts of the Task Force resulted in four recommendations for Federal action for addressing childhood asthma, which are presented in this strategy. The strategy also sets forth guiding principles that were used to develop the four recommendations.

## **Guiding Principles**

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Federal agency actions can provide leadership and direction in reducing environmental risks to protect children who have asthma or are at risk of developing it. Recommendations for action put forward in this initiative are predicated on the principles that federal action must have:

- **A focus on efforts to *eliminate the disproportionate impact of asthma in minority populations and those living in poverty.***
- **An emphasis on *partnerships and community based programs.***
- **A commitment to setting *measurable and consistent goals* for childhood asthma under the Healthy People 2010 program.**
- ***An investment in evaluation* to identify those strategies that are most effective in reducing the burden of asthma so that they may be replicated.**

## **Recommendations**

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### **Research**

Strengthen and accelerate focused research into the environmental factors that cause or worsen childhood asthma.

- **Strengthen and accelerate research into the environmental factors that may contribute to the onset of asthma in children.**
- **Expand and accelerate research to develop and evaluate environmental strategies that will improve the quality of life of people with asthma.**

## Public Health Programs

Implement public health programs that foster improved use of current scientific knowledge to reduce environmental exposures to prevent and reduce the severity of symptoms for those with asthma.

- **Promote clinician and patient implementation of national guidelines for reducing environmental risks that worsen asthma.**
- **Expand support for state and local public health action.**
- **Reduce children's exposure to environmental tobacco smoke and other indoor triggers in their homes.**
- **Establish school based asthma programs that help reduce or eliminate allergens and irritants and that promote student's self management of asthma and full participation in school activities.**
- **Continue to reduce outdoor air pollution.**

## Surveillance

Establish a coordinated, integrated, and systematic nationwide asthma surveillance system for collecting and analyzing health outcome and risk factor data at the state, regional and local levels.

## Disproportionate Impact on the Poor and Minorities

Identify the reasons for and eliminate the disproportionate burden of asthma among different racial and ethnic groups and those living in poverty.

- **Improve asthma management for children within the medicaid program.**

